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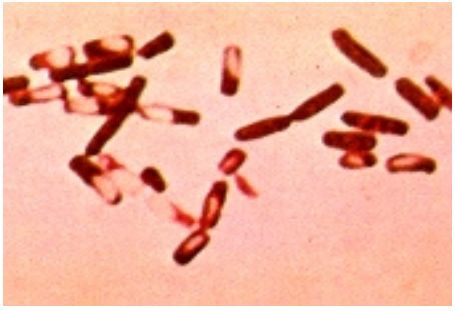
Terrorism Supplement to the Indiana Department of Education's Checklist for a Safe and Secure School Environment



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Terrorism Supplement

to the

Checklist for a Safe and Secure School Environment

From

The Indiana Department of Education

February 2003

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Editor

Leah M. Ingraham, Marian College

Cover Captions

A This battered globe was originally in the plaza of the World Trade Center. The artist, Fritz Koenig, envisioned it as a symbol of world peace. It was placed in Battery Park on March 11, 2002, as a temporary memorial to those whose lives were lost in the September 11, 2001, terrorist attack.

B An eternal flame at the base of the globe was ignited September 11, 2002, in honor of the victims of September 11, 2001.

C Shortly after the September 11th attacks, Indiana fire fighters honored the first responders killed with a memorial west of the state capitol. A flag was planted for each lost life.

D *Bacillus anthracis:* This photograph shows a stained preparation that allows microbiolgists to see the organism that causes anthrax. The light, rounded areas inside the rod-shaped cells are spores. As a spore-former, this bacterium can be "weaponized." Its ability to make spores helps this organism survive conditions that easily eliminate bacteria that do not form spores.

E Indiana limestone was chosen to immortalize this quote from President George W. Bush.

F An eagle soars on this poster created as part of the Indiana anniversary ceremony on September 11, 2002.

Photographic Credits

Figures A, B, C, E, and F courtesy of Leah M. Ingraham. Figure D courtesy of Centers for Disease Control and Prevention

This Supplement is for informational purposes only and is not intended to be legal advice or endorsement of specific policies, procedures, or medical treatments. Effective safe school planning for terrorism requires interaction with those local official first responders who are the most knowledgeable about possible agents. In general the county emergency management agency and local health care specialists are the best resources for specific planning.

Message from Dr. Suellen Reed
Superintendent of Public Instruction

In June 1999, the Indiana Department of Education published the *Checklist For A Safe and Secure School Environment.* Since its release to all public and non-public schools in Indiana, the Department has undertaken many activities to support school professionals in creating and maintaining a safe and disciplined environment that is conducive to learning excellence.

Chief among the Department's efforts has been the creation of the Indiana School Safety Specialist Academy, which provides on-going, certified training and information on national and state best practices in all areas of school programming. Leading national experts in all areas of school have presented at Academy sessions. More than 750 Indiana school personnel from both public and non-public schools have participated.

The events of September and October 2001 showed just how important it is to stay current on the types of actions that might threaten schools. The World Trade Center destruction and the Pentagon attack show the power of explosives and fire. The Anthrax mailings, on the other hand, showed vividly that American citizens are vulnerable to terrorist use of unconventional weapons.

The events of 2001 encouraged the Indiana Department of Education staff to arrange for this "Terrorism Supplement" to the original Checklist. Unlike the checklist, which featured photos of in-school actions for school safety preparedness, this supplement begins with photos related to the recent horrific events that significantly affected our citizens both in and out of Indiana schools. However, like the original checklist, the supplement is designed to be brief, to-the-point, user-friendly, and practical. We trust that you will find it helpful in broadening your knowledge and preparedness for three types of terrorist activities: radiological, biological, and chemical.

Indiana's school safety program has received recognition as a model for other states. It is our pledge to continue to be in the forefront of school safety preparedness.

Sincerely,

Dr. Suellen Reed

Dr. Suellen Reed
Superintendent of
Public Instruction

Introduction

The *Checklist For A Safe And Secure School Environment* featured 12 elements important in the planning and development of effective responses to help schools be prepared for threats to school safety. These are listed in the table below along with comments regarding the necessity of updates that expand the practice of school safety to prepare for deliberate acts of terrorism.

Table 1. Suggested Terrorism Updates for School Safety

Checklist Element	Update for Terrorism Preparedness
1. Philosophy, Mission, and School Climate	1. No update required
2. Partnerships with Community and Parents	2. New partners necessary
3. Safety Policy, Procedures, and Plans	3. Specific responses for various threats
4. Arrangements for School Security Staff	4. Terrorism-related training for security staff
5. Student Conduct in the School Setting	5. No update required
6. Curriculum	6. In-service for teachers and new content for students suggested
7. Student Support	7. Terrorism-related training for student support staff
8. Drugs and Gang Prevention/Intervention	8. No update required
9. Assessment of Buildings and Grounds	9. Particular attention to air handling systems
10. Violence Prevention at Competitive Sports Events	10. Recognition that large events may be targeted
11. Transportation Needs for Safety Planning	11. No update required
12. Records and Evaluation	12. No update required

This Supplement will be divided into two main sections: first, an overview of terrorism and the types of attacks that might result from terrorist activity; second, some suggestions for updating the above Checklist items.

Terrorism

Terrorism is defined as perpetration of a destructive act to inflict harm through damage to infrastructure, disruption of economy, or direct injury to humans, plants, or animals. Unlike warfare where uniformed forces confront each other in a manner that follows the conventions of declared armed conflict, terrorists often target civilian populations. The goals the terrorists have in mind may be not only to harm specific high profile or essential targets but also to spread panic

and fear throughout the population as a whole. The motivations may be to further a political view or goal, to protest against a policy or an activity, or to try to effect a change.

Weapons used by Terrorists

Recent experience has taught Americans that terrorists can rely on a vast variety of weapons. The Murrah Building of Oklahoma City was destroyed by the detonation of a bomb hidden in a rental truck and composed of ordinary fertilizer and diesel oil with the resulting loss of 168 lives. The World Trade Center Towers were destroyed by the conversion of jet aircraft into guided missiles carrying tons of highly flammable fuel with the resulting loss of more than 2,800 persons. Smaller scale attacks have featured bombs hidden in dumpsters or cars as well as assassinations through use of high-powered rifles. But what has created even more concern on the part of political leaders and government officials is the potential of terrorists employing "Weapons of Mass Destruction" or as they are abbreviated "WMDs".

WMDs are defined as weapons capable of large-scale destruction and/or loss of life. They include radiological, chemical, and biological weapons.

Radiological Terrorism

There are two possibilities for radiological weapons that might be used by terrorists. Nuclear weapons might become available because of state-sponsored activities designed to build nuclear capability or because of theft of such weapons from governmental facilities. While the acquisition of such weapons is a possibility, there is greater concern that terrorists might use so-called "dirty bombs." These weapons would be essentially conventional explosive devices to which have been added radioactive materials. The widespread use of radioisotopes in modern medicine, such as Cobalt 60 sources used in cancer therapy, may provide terrorists with opportunities to acquire such sources and to include them in the manufacture of a bomb. Once the bomb was detonated, there would be—in addition to the destruction caused by the explosion—the dispersal of the radioactive material.

Chemical Terrorism

There is an abundance of harmful chemicals that are used in modern industry and agriculture that could be used by terrorists. For example, trucks transporting volatile solvents or pesticides are just two possible targets that might attract terrorists. In addition to chemicals familiar for civilian use, however, are the chemical warfare agents stockpiled by the militaries of several nations. Beginning in the era of World War I, advances in organic chemistry made possible mass production, which continued despite the 1925 Geneva Protocol, which banned first use. Today several nations, including the United States, maintain stockpiles of chemical warfare agents, thus making possible the potential use of these materials, either by the states that possess them or by terrorists who can acquire them or possibly manufacture their own. The Sarin gas (a nerve agent) attack in Tokyo Subway in 1994 by the Aum Shinrikyo cult is a vivid example of the willingness of terrorists to employ such weapons.

The types of chemicals that have been produced as potential weapons are listed in the following table. Greater detail about these agents is presented in Appendix A.

Table 2. Chemical Agents

Type of Agent	Example	Characteristics
"Blood" Agent	Cyanide	Referred to as blood agent because of mode of distribution through the body.
Incapacitating Agents	Anticholinergic compounds	Causes temporary and nonlethal impairment.
Nerve Agents	Sarin	Most toxic of known chemical agents.
Pulmonary Agents	Phosgene	Causes mucous membrane irritation and delayed pulmonary edema with shortness of breath.
Riot-control Agents	Tear gas, Pepper Spray	Causes irritation of mucous membranes and tearing.
Vesicants (Blister Agents)	Sulfur Mustard	Causes blistering.

Usually a chemical exposure is recognized very quickly because of characteristic odors and/or symptoms of those exposed. For most chemical exposure, decontamination of the individual exposed is very important. This requires care because the responders must not themselves come in contact with the agent.

Highly toxic and dangerous chemicals require the response of a HazMat team (i.e., individuals especially trained to deal with Hazardous Materials). These teams are usually affiliated with fire departments. There are several teams in Indiana. The county emergency management agency has information about those located closest to a school district.

The levels of training that HazMat responders may have are given in Table 3.

Table 3. Levels of HazMat Expertise

HazMat Team Levels of Training
• Hazardous Materials Specialist - can support the Technicians (see below) with more specific information about the substances • Hazardous Materials Technician - can approach the point of release to plug, patch, or stop release • First Responder Operations - can contain a released hazardous chemical and prevent exposure or contamination • First Responder Awareness - can initiate an emergency response by notifying proper authorities

The "Levels of Training" go from the highest to the lowest in the above table. The "First Responder Awareness" at the lowest level is someone without special training, but who 1.) has enough knowledge to recognize a chemical release has occurred; 2.) knows to deny anyone, not already contaminated, access to the area; and 3.) knows how to notify the emergency responders best equipped to manage the scene and the casualties.

A school wishing to have someone at this level can do so by interacting with county emergency management personnel to identify the nearest qualified team, that could assist in training the school personnel. Note that not every county has such a team, and there may be a delay before a team is mobilized and on site.

The level of personal protective equipment (PPE) that HazMat teams may use depends upon the level of expertise in the team. There are approximately 35 teams in Indiana. Often a team will arrive with different members assigned to different levels of protection. The highest level of protection is designated Level A, where the responder and his air supply are all contained within a chemically resistant suit. This attire is used initially until the relative danger of the substance is ascertained. The same level may be used throughout an incident for the most hazardous of substances. Level A protection might also be worn by teams responding to an airborne biological agent, such as an incident with suspected anthrax spore release. Note that explicit training is necessary for individuals who will "suit-up" for a hazardous materials incident.

In situations requiring the highest level of protection, three zones will be designated by the official responders: a "hot zone" where the threat is located; a "warm zone" where teams moving into the hot zone transition to the most dangerous area and where victims will be decontaminated; and a "cold zone," which is free of the agent. It is extremely important that school personnel remain outside the hot and warm zones, and that they limit their movements around the affected areas as directed by an Incident Commander or official responders.

Decontamination of victims will be carried out in the warm zone, usually by setting up a series of portable showers through which victims may pass. Removal of clothing is necessary at some point in this process, which will be conducted by the responding HazMat teams as up to 80 percent of contamination with most agents can be removed with the clothing. Once victims have been decontaminated, they will be transported for medical care as necessary. It is extremely important that contaminated individuals do not enter emergency departments as the health care providers and the facility will become contaminated. The team responding to a chemical incident will provide explicit instructions to those on the scene who are ambulatory. For victims who require expert medical care, the team members will likely decontaminate, provide first aid at the scene, and arrange transport. Contaminated victims should not be transported in personal vehicles.

Biological Terrorism

The Centers for Disease Control and Prevention (CDC) has provided a listing of the most dangerous biological agents that might be used by terrorists. These are designated "Category A" and are listed in Table 4. For greater detail about these agents, see Appendix B.

Table 4. CDC Category A Bioagents

Agent	Characteristics	Treatment
Bacillus anthracis	This bacterium forms resistant spores, which can be easily dispersed. Spores taken into the body develop and cause the disease anthrax.	Antibiotics available
Francisella tularensis	This bacterium causes tularemia, a disease that is not generally fatal but is debilitating.	Antibiotics available
Yersinia pestis	This bacterium causes plague.	Antibiotics available
Hemorrhagic Fever Viruses	HFVs are viruses that cause disease such as Ebola, Lassa, and Marburg.	Antiviral drugs have been used only with Lassa fever
Variola	This is the virus of smallpox.	Immunization is possible
Clostridium Botulinum toxin	The toxin of this bacterium is the most potent poisonous substance known to man. It causes progressive paralysis.	Antitoxin is available

The above bioagents have achieved the Category A status because of the following aspects:

- All have a high level of mortality or morbidity (serious symptoms of disease)
- Some have no specific treatment
- Some have no vaccine
- Most can be easily delivered to victims via a respiratory route (i.e., inhalation of the bioagent from aerosols)
- All require both immediate public health intervention for those exposed and expert medical care for those who are ill

As indicated in Table 4, there are antibiotics that can be used to treat the bacterial disease and an antitoxin for treatment of botulinum toxin. There are some antivirals (medication that attacks viruses). However, these treatments are still experimental. In fact, the treatments for all of these diseases are subjects of intense research, and in the future more options will no doubt be available.

In addition to treatments once a person is ill, there are also measures that can be taken to help prevent disease in exposed persons. For example, antibiotic prophylaxis (i.e., advance treatment to prevent disease) is possible for anthrax. Additionally, there are vaccines available, which can be administered to persons either before exposure or just after exposure before the incubation period (i.e., the time period between exposure and the development of disease). For example, smallpox vaccine can be administered in the first three days after exposure to the virus with a good possibility of preventing disease or at least lessening the severity of disease.

Smallpox vaccine is federalized so that individual private health care providers do not have access to it. As this supplement is being prepared, the CDC is moving forward with advance immunization of Heathcare and Public Health Smallpox Response Teams who will be responsible for the initial actions required should there be a smallpox outbreak. Most of the US population is vulnerable to smallpox because few persons have been vaccinated since the 1970s,

and just as with tetanus immunization, "booster" administration of the vaccine is needed to ensure prolonged protection.

Vaccines for anthrax and for plague have also been developed but are not generally available. It is not certain how effective these vaccines would be against the inhalational varieties of these two diseases.

Important activities for school emergency planners include having connections with local public health departments and with local hospital and clinics. More details about connections are given in sections below (see "Partnership" section below). It is important to recognize that biological attacks can be unannounced (i.e., covert attack). Therefore, it will not be until exposed persons have developed symptoms that realization of a biological attack will occur.

Application of Terrorist Planning to "Natural" Events

Certainly not every school district in Indiana will become the target of terrorist attack. All school officials hope that none of their districts will be targeted. But one advantage of explicit planning for radiological, chemical, and biological events is that the preparation also applies to accidents or natural disease outbreaks. For example, radioactive waste is transported both by rail and roadways in the state. An accident involving one of these carriers might result in radiation exposure near these routes. Large amounts of toxic chemicals are stored at certain industrial sites and an accident might result in their release. Finally, large-scale disease outbreaks such as pandemic influenza (i.e., a world-wide epidemic of a new flu virus strain) might occur. Whatever school districts do to prepare for deliberate attack will also place them in good stead for these type events.

Updates to the 1999 *Checklist For A Safe And Secure School Environment*:

Partnerships with Community and Parents

Most school officials in their security planning have forged partnerships with local law enforcement and fire departments. If not, these relations should be established. Preparation for terrorism requires strong partnerships with additional partners. County emergency management agency personnel are responsible for a county level response plan to emergencies.

Beginning in 1999, the State Emergency Management Agency (SEMA) arranged contracts to help counties with their planning. The first effort, supported by the contractor Batelle, was county-by-county assessments of 1.) Potential threats, 2.) vulnerabilities, and 3.) public health readiness. County emergency management agencies were responsible for the first two assessments. Threat determination was carried out by collecting data on the presence of known or suspected local groups or individuals who are inclined to violent expression of the beliefs or grievances. Vulnerability determination was done through cataloging possible targets that might attract terrorists such as facilities where large amounts of toxic chemicals might be stored or large-scale events where large numbers of persons might gather. The final assessment was aimed at broadly analyzing the "Public Health System," which includes not only the public health services within a jurisdiction but also the medical care services available. Local health

departments served as the lead agencies for these determinations, which were supported through the Indiana State Department of Health.

Because of these activities, much is known about each Indiana county's level of preparedness, and school officials can interact with their county emergency management agencies and local health departments to learn more about the situations in their own jurisdictions.

The second effort has been to assist county emergency management agencies in updating their emergency plans to include responses to terrorism. SEMA arranged for the contractor, RPI/Titan, to support these plan updates. Counties with populations from 35,000 to > 100,000 have had exercises to validate their plans. As of September 2002, counties with populations < 35,000 have not yet had these exercises.

School officials may have interacted during the above described exercises and may already be connected to the responding agencies. If not, it is important for schools to be included and the two lead agencies, the county emergency management agency, and the local health department should be approached to learn how schools can be included. School security personnel are natural links to the emergency management personnel, and school nurses are the natural links to the public health nurses. Furthermore, teachers of chemistry and physics might be natural links to the nearest HazMat teams. This possibility could be explored by contacting the emergency management director.

Possible roles for the above-mentioned school personnel are listed in Table 5 below. Note that whenever school personnel are tapped to assume additional duties, they need to feel confident in these roles and need additional support and training.

Table 5. Possible Roles for School Personnel in Terrorism Planning

School Role	Possible Role in Terrorism Planning
School Safety Specialist and School Security Staff	Link to county emergency management agency. Become familiar with Incident Command System. Learn the location of the nearest HazMat Team.
School Nurse(s)	Link to local health department (LHD). Possibly participate in active surveillance for infectious disease (active surveillance is based on proactive reports to LHDs about school absences due to illnesses). Schools might be locations for mass prophylactic clinics where asymptomatic but exposed persons could come for immunizations or antibiotic protection.
Chemistry/Physics Teachers	Link to nearest HazMat Team. Could function as the "First Responder Awareness" who can initiate an emergency response by notifying proper authorities during a suspected or known chemical or radiological incident (See Table 3 for details).
Student Services Personnel such as Counselors, Social Workers	Recognize the psychological impact of terrorism even when events are not local (see "Student Support" section below).

Safety Policy, Procedures, and Plans

The school safety planning team should review the existing plan for updates that relate to terrorism. The team can review the information about the types of terrorism as described in this supplement and in appendices A and B along with consideration of information provided in Table 5. A strong link with the county emergency management agency is very desirable. The team might also participate in Incident Command System (ICS) trainings offered by SEMA in order to understand how the school response can be integrated with the command structure used by many official first responders. Local fire departments can also help school personnel understand ICS.

If a school has had an incident similar to a terrorist attack (e.g., gas leak, solvent spill, anthrax hoax), the team can carefully review the response made to that incident and discuss needed improvements suggested by the effectiveness of the response measures undertaken at the time. With respect to anthrax, many schools have already changed their process for handling mail as recommendations were widely circulated during October of 2001. Best practices include:

- Students should not be responsible for opening school mail
- Mail should be opened by a designated staff person or persons who should be offered the use of disposable gloves
- Mail should be opened in a separate location not open to general traffic and where air handling can be quickly shut down
- Mail openers should be familiar with the clues that suggest suspicious mail (i.e., mismatch of postmark and return address, lack of specifics with respect to addressee, bulges or discoloration, etc.)
- Suspicious mail should not be taken out of the mail opening location
- The response plan for suspicious mail, which has been discussed in advance with local responders (HazMat teams, fire or police departments, etc.), should be activated

Communications during emergencies may be difficult due to loss of phone lines and of electricity as became evident during the tornados in October 2002. Alternate means for communication both within the school and with agencies outside the school are necessary. Dependence on cell phones is unlikely to be desirable as there is little “surge” capacity via this means, and a large event which results in much expanded use of cell phones quickly overwhelms this mode of communication.

School professionals can review their radio and battery-operated communication systems as part of updating their emergency response plans. Any dependence on batteries should be accompanied by arrangements for adequate supplies of fresh batteries to sustain a school through several hours. Be aware that battery-operated radio/TV may be a vital link to life-saving information during either natural or perpetrated events.

Arrangements for School Safety Specialists and Security Staff

If school security staff are not familiar with Incident Command System (ICS), they could benefit from a training that at least provides an overview of the system. Basically, ICS:

1. Assures uniformity of command structure used by various responding parties
2. Provides for common, easily understood language
3. Promotes a manageable span of command (typically no more than seven individuals reporting to one supervisor)
4. Coordinates use of resources
5. Arranges for safety of responders
6. Coordinates messages to the public and the media

In addition, a terrorist attack or suspected terrorist attack will have a criminal investigation occurring along with the efforts of official first responders to work on behalf of victims. Protecting evidence is essential for later prosecution. Many schools have already provided for this link because of the nature of the high profile school attacks, which required law enforcement intervention and investigation. If this part of the school plan is not fully developed, however, there should be consultation with local law enforcement. The Federal Bureau of Investigation (FBI) has been designated as the lead agency for criminal investigation of terrorist attacks. In Indiana the closest regional FBI office, therefore, will probably be the one designated to work with the school district in cooperation with state and local police.

All school staff must be aware that secondary devices may be employed by terrorists, which are designed to cripple, harm, or kill the first responders. Examples include the bombing of a clinic in Atlanta where a secondary device hidden in a dumpster was exploded after the arrival of police and firefighters. Therefore, it is extremely important to be vigilant in responding to an explosion and to be cautious about the possibility of additional devices. Likewise, a multiple agent attack might occur. A “dirty” bomb combining conventional explosive with radioactive material is one example of a multi-agent device.

Curriculum

Many of the curricular pieces to support school safety have focused on non-violent methods of settling disputes among students or between students and school staff. More recently there has been an effort to encourage students to help bear responsibility for school safety by alerting school officials if they learn of plans for attacks.

Terrorism of various kinds is much in the news. Students of all ages may have questions and worries. For younger students reassurance about the scenes on TV may be helpful (e.g., “The events happened at a distance”; “ They are not happening now”). Older students may like additional factual information. Some of these detailed topics can be addressed within the curriculum of existing courses as appropriate. Facts about biological agents may be obtained from the local health department or can be found on the Web sites of the Indiana State Department of Health or of the Centers for Disease Control (see resource section in Appendix C). It is important to help students identify the best quality, fact-based information.

Older students may wish to explore the social, economic, and historical factors that underlie terrorist movements. School officials will want to include parents and community partners in planning how such discussions can be accommodated in the school setting.

Student Support

Most schools have integrated their Student Assistance, Counseling, and Referral programs into their safety plans. Likewise, most schools have arranged for a crisis team to assist both students and staff emotionally impacted by an event. The Indiana Department of Education supports training that emphasizes crisis management in schools for both students and staff through the NOVA program. Trainings are offered frequently and can be conducted in local schools.

The emotional after-effects of a terrorist attack are often sustained over long periods of time with anniversaries particularly difficult for those victimized, especially when there is extensive media coverage that provides re-enactments. Even if youngsters have had no direct experience, any large-scale event, which commands the public's attention, can be difficult. School counselors and social workers sensitive to these possibilities can be watchful for the need for additional support during these times.

Student services staff should be aware of community resources. For example, the Division of Mental Health in the Indiana Family and Social Services Administration provides trainings for professionals in community mental health centers that are relevant for support of those who respond during highly traumatic events and are impinged upon by the stress of maintaining operations regardless of personal feelings.

School nurses who connect with their professional peers in the local public health departments can help provide alerts when unusual disease patterns occur. For example, a significantly high absence rate due to flu-like illness outside the flu season might be an early indicator of a serious disease outbreak, either intentional or natural. Communication of such unusual patterns to public health can aid in rapid recognition of serious disease with appropriate investigation, treatment, and containment strategies initiated in a timely fashion.

As mentioned in Table 5, schools might be appropriate sites for large-scale vaccination or prophylaxis clinics. Connections between public health and school nurses help facilitate these possible arrangements.

Assessment of Buildings and Grounds

Because the potent delivery of many agents is via air-handling systems, it is important for school officials to understand the pattern of airflow through their buildings and whether or not parts of the building HVAC system can be isolated or disabled rapidly.

In addition to specific review of the school buildings and adjacent grounds, there may be hazards in the surrounding neighborhoods. County emergency management agency personnel have recently carried out a vulnerability assessment for the county, which includes inventory of

hazards. School safety teams can learn more about what types of hazards are closest to them by meeting with their county emergency management agency director.

Violence Prevention at Competitive Sports Events

Events that draw large crowds may be attractive occasions for terrorists. In larger cities, it is becoming customary to limit or to search the items carried by those attending such events. Additionally, it may be wise to search the parking lot, bleacher seats, rest rooms, trash containers, team facilities, and building exterior before spectators arrive. Then, careful observance is maintained during and just after the event. Generally, this will mean that the school security team must be amplified, and if volunteers are drawn in to help with this function, they should receive training so that they can safely and effectively assist the staff.

Appendix A. Chemical Agents

Type of Agent	Example	Characteristics*
"Blood" Agent	Cyanide	Referred to as blood agent because of mode of distribution through the body. Toxic effects are through interaction with essential enzymes that depend on metals for their activity. Antidotes are sodium nitrite and sodium thiosulfate.
Incapacitating Agents	Anticholinergic compounds	Causes temporary and nonlethal impairment. Physiological symptoms characterized by dryness of skin, redness of complexion, constriction of pupils of the eyes, and confusion. Usually requires only general supportive management of the patient. Physostigmine may be needed in severe cases.
Nerve Agents	Sarin	Most toxic of known chemical agents. Can cause death within minutes of exposure. Acts through inhibition of enzyme important in nerve transmission. Antidotes are atropine & 2-PAM chloride
Pulmonary Agents	Phosgene	Causes mucous membrane irritation and delayed pulmonary edema with shortness of breath. Patient must remain at rest and receive treatments for respiratory complications.
Riot-control Agents	Tear gas, pepper spray	Causes irritation of mucous membranes and tearing. Usually not prolonged effect. Symptomatic care provided if effects continue
Vesicants (Blister Agents)	Sulfur mustard	Causes blistering. Has delayed effects. No antidotes. Symptomatic care.

*Any medical management required for those exposed to chemical agents must be delivered by trained and knowledgeable health care providers.

Appendix B. CDC Category A Bioagents

Agent	Characteristics	Treatment
Bacillus anthracis	This bacterium forms resistant spores, which can be easily dispersed. Spores taken into the body develop and cause the disease anthrax. The most dangerous forms of anthrax are those which result from either inhalation or ingestion of the spores. Patients with anthrax do not transmit the disease to others.	Antibiotics, respiratory support, and symptomatic care
Francisella tularensis	This bacterium causes tularemia, a disease that is not generally fatal but is debilitating. It is not transmitted from person to person but coming into contact with animals that have the disease may result in infection. The most common example of this transmission has been hunters who acquired the disease when dressing out an animal that has tularemia.	Antibiotics and symptomatic care
Yersinia pestis	This bacterium causes plague. The most dangerous type of plague is pneumonic plague, which results from inhalation of the bacterium. Transmission from person to person is possible with pneumonic plague but the most common form of the disease results when fleas carry the bacterium from animals that are infected. The type of human cases of plague that results from flea bites is called bubonic plague which is serious but has a lower fatality rate than the pneumonic form	Antibiotics and symptomatic care
Hemorrhagic Fever Viruses	HFVs are viruses that cause disease such as Ebola, Lassa, and Marburg. Contact especially with blood or other body fluids of a patient is the usual mode of transmission from person to person. These diseases have arisen from tropical areas and were probably originally viruses harbored in animal populations. The fatality rate of the HFVs varies with the type of virus but can be very high.	Antiviral drugs have been used successfully with Lassa fever. Supportive medical care is essential
Variola	This is the virus of smallpox. It is easily transmitted from person to person through both airborne and direct contact routes. Patients with smallpox should be isolated to avoid spread of the disease. At present there is no naturally occurring smallpox in the world as the disease was eradicated during the 1970s through efforts of the World Health Organization. There is fear about smallpox because there is evidence that the virus had been "weaponized" as a biological warfare agent.	Supportive care and symptomatic relief are the only measures available at present
Clostridium Botulinum toxin	The toxin of this bacterium is the most potent poisonous substance known to man. It causes progressive paralysis. The usual form has been from eating food in which the bacterium grew and produced its toxin. Heating food for more than 10 min at boiling temperature inactivates the toxin.	Antitoxin is available. Supportive care especially respiratory is necessary

Appendix C. Resources for Information on Terrorism

Several Web sites are available that provide good quality information and frequent updates on terrorism topics. Examples below include both Indiana and US government sites.

Indiana Counter-Terrorism and Security Council (C-TASC)
http://www.in.gov/c-tasc/

Indiana School Safety Specialist Academy
http://www.doe.state.in.us/issa/welcome.html
(Click on "Emergency Response")

Indiana State Emergency Management Agency
http://www.in.gov/sema/em.html
(This site has a link to County Emergency Management Agencies)

Centers for Disease Control and Prevention
http:/www.bt.cdc.gov

Academic Institutions often post helpful information also. An example is given below.

Center for Civilian Biodefense Strategies at Johns Hopkins University
http://www.hopkins-biodefense.org/

Item	Activity	Responsible Persons(s)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
A. Partnerships	A-1. Establish and/or strengthen													
	relationships with county													
	emergency management													
	agency (CEMA) and local													
	health department (LHD)													
B. Safety Plans	B-1. Update plans to include													
	nuclear, chemical & bio-													
	logical attack or accident													
	B-2. Seek opportunities for													
	trainings & exercises with													
	emergency management													
	B-3. Review emergency comm-													
	unication arrangements													
C. School Security Staff	C-1. Arrange training for security													
	staff to become familiar with													
	Incident Command System													
	C-2. Review with law enforce-													
	ment requirements for chain													
	of custody													
	C-3. Prepare for possibility of													
	secondary or multiple agent													
	attacks													
D. Curriculum	D-1. Evaluate curriculum supp-													
	lements to reassure younger													
	students and to provide fact-													
	based information to older													
	students on terrorism-related													
	topics													
Item	**Activity**	**Responsible Persons(s)**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
E. Student Support	E-1. Arrange school based													
	NOVA training through Indiana													
	Dept of Education													
	E-2. Make healthy and helpful													
	arrangements for student													
	support for anniversaries of													

	traumatic events													
	E-3. Identify community mental													
	health professionals to whom													
	referrals can be made following													
	traumatic events													
	E-4. Formalize relationships													
	between public health and													
	school nurses													
	E-5. Discuss possibility of													
	providing facilities where mass													
	prophylaxis clinics might be													
	held													
F. Buildings	F-1. Evaluate air handling system													
	for rapid shut down													
	F-2. Arrange protection for air													
	intakes													
	F-3. With input from county													
	emergency management													
	review possible nuclear, chemical													
	or biological hazards nearby													
G. School Events	G-1. Update event safety													
	procedures to include the													
	possibility of terrorist attack													